METHODS AND SYSTEMS FOR LASER CALIBRATION AND EYE TRACKER CAMERA ALIGNMENT

ABSTRACT OF THE DISCLOSURE

The present invention provides methods, systems, and apparatus for calibrating a laser ablation system, such as an excimer laser system for selectively ablating a cornea of a patient's eye. The invention also facilitates alignment of eye tracking cameras that measure a position of the eye during laser eye surgery. A calibration and alignment fixture for a scanning laser beam delivery system having eye tracking cameras may include a structure positionable in a treatment plane. The structure having a feature directing laser energy incident thereon to a calibration energy sensor, at least one reference-edge to determine a characteristic of the laser beam (shape, dimensions, etc.), and an artificial pupil to determine alignment of the eye tracking cameras with the laser system.